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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/671,777

09/29/2003

Kevin Peck

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BUCHANAN, INGERSOLL & ROONEY PC
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EXAMINER

KAPLAN, HAL IRA

ART UNIT

PAPER NUMBER

2836

MAIL DATE

DELIVERY MODE

05/17/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/671,777	PECK ET AL.	
	Examiner	Art Unit	
	Hal I. Kaplan	2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14, 15 and 20-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14, 15 and 20-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 March 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings were received on March 20, 2007. These drawings are accepted.

Claim Objections

2. Claims 15 and 25 are objected to because of the following informalities: Claim 15 line 2, the phrase "the power subsource" lacks proper antecedent basis. Claim 25 recites the limitation "regulating is time proportioning ...". Claim 25 depends from claim 24, which recites the limitation "regulating ... prior to the step of time proportioning". It is unclear to the Examiner whether the regulating and time proportioning steps are the same or different, and if different, which is performed first. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 14, 15, and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over the US patent of Payne (4,634,843) (Payne '843) in view of the US patent of Seitz et al. (6,246,831).

As to claims 14 and 15, Payne, drawn to a dual mode power control arrangement for cooking appliance, discloses, in Figure 5, a method for proportioning power to a load, comprising: dividing an electrical resistive load among a plurality of load elements in parallel, wherein the sum of the power provided to each of the plurality of load elements (12,14,16,18) is equal to the power of the AC power source (L1,L2) (see column 14, lines 10-15 and 25-32). Payne does not disclose the time proportioning and applying steps. Seitz, drawn to a fluid heating control system, discloses a method for power splitting comprising (a) time proportioning and AC power source and (b) applying a half-cycle of the time-proportioned AC power source sequentially to each of the plurality of load elements (see column 34, lines 60-64; column 37, line 51 - column 39, line 9; Table 6; and Figure 11), wherein the electrical power to each power subsource is

matched to each of the load elements. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have used the technique of Seitz to proportion the AC power from the AC power source of Payne, in order to be able to more easily determine the current being delivered while still maintaining even heating without overloading the circuit.

As to claims 21 and 22, Seitz discloses that the maximum power that the power source will deliver is a function of how many heating elements are used (see column 10, lines 45-47). This means that if one of the heating elements fails, the others will still work (redundancy), and since fewer heating elements will then be used, there will be a non-zero reduction in the sum of the power.

As to claim 23, Seitz discloses an indicator of a failure condition (see column 28, lines 44-51 and column 29, lines 2-21).

7. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Payne in view of Seitz, as applied to claim 14 above, and further in view of the US patent application publication of Kallus et al. (2002/0101743).

As to claim 20, Payne in view of Seitz disclose all of the claimed features, as set forth above, except for the claimed unity power factor. Kallus, drawn to a power line separator, discloses AC power factor correction circuitry for an AC power source, wherein a unity power factor is realized at the AC power source (see paragraph 12, lines 1-6). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have used the circuitry of Kallus to realize a unity power factor at the

AC source of Payne in view of Seitz, in order to get the most power possible from the available current.

8. Claims 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Payne in view of Seitz as applied to claim 14 above, and further in view of the US patent of Braun et al. (4,829,159).

As to claims 24-26, Payne '843 in view of Seitz disclose all of the claimed features, as set forth above, except for time proportioning or controlling a phase angle of the AC power source. Braun, drawn to a method of optimizing control of plural switched electric loads to reduce switching transients, teaches, in Figures 1 and 2, a circuit to divide an electrical heating load among a plurality of load elements in parallel, wherein the power splitting is performed by controlling a phase angle of the AC power source (see column 5, lines 43-54 and column 5, line 63 through column 6, line 10). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to build the circuit of Payne '843 in view of Seitz so that the power splitting is performed by controlling a phase angle of the AC power source, as taught by Braun, in order to minimize the load variations that the mains is subjected to and therefore allow short clock periods.

Response to Arguments

9. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., a mismatch occurring when a conversion is done from series to parallel loads; separate and equal power subsources; and a power division circuit installed and

functioning between an existing control system and resistive loads in a slave configuration, are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

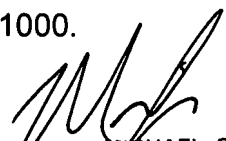
10. Applicant's argument regarding load redundancy is addressed in the rejection above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hal I. Kaplan whose telephone number is 571-272-8587. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on 571-272-2084. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

 5/12/07
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